

DOCUMENT RESUME

ED 174 946

CS 004 930

AUTHOR Dillingofski, Mary Sue, Comp.
 TITLE Nonprint Media and Reading: An Annotated Bibliography.
 INSTITUTION International Reading Association, Newark, Del.
 PUB DATE 79
 NOTE 36p.
 AVAILABLE FROM International Reading Association, 800 Barksdale Road, Newark, Delaware 19711 (Order No. 334, \$1.00 member, \$1.50 non-member)
 EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Adult Basic Education; Audiotape Recordings; *Audiovisual Aids; *Computer Assisted Instruction; Educational Television: Elementary Secondary Education; Films: Higher Education; Listening: Media Research: Public Television; *Reading Instruction; *Reading Research; *Tape Recordings; *Television

ABSTRACT

The 72 items in this bibliography concern the use of nonprint media in reading instruction. A section on audio and visual channels concerns the use of audiovisual materials, tape recordings, and filmstrips as instructional aids. The section on television and film includes items on film, learning from television, commercial television, public television, and locally produced television. The final section concerns computer assisted instruction in reading. A list of recommended readings is included at the end of this bibliography for those who would like practical suggestions for applying educational technology in the reading curriculum. (MKM)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED174946

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

NONPRINT MEDIA AND READING

An Annotated Bibliography

Compiled by

Mary Sue Dillingofski
University of Wisconsin at Madison

1979

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

International Reading
Association

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."



Published by the

INTERNATIONAL READING ASSOCIATION
800 Barksdale Road Newark, Delaware 19711

CS 884 938

INTERNATIONAL READING ASSOCIATION

OFFICERS

1979-1980

- President* Roger Farr, Indiana University, Bloomington, Indiana
Vice President Olive S. Niles, State Department of Education,
Hartford, Connecticut
Vice President-Elect Kenneth S. Goodman, University of Arizona,
Tucson, Arizona
Executive Director Ralph C. Staiger, International Reading Association,
Newark, Delaware

DIRECTORS

Term Expiring Spring 1980

- Mary Ann Baird, State Department of Education, Jackson, Mississippi
Addie Stabler Mitchell, Morehouse College, Atlanta, Georgia
Jean E. Robertson, University of Alberta, Edmonton, Alberta

Term Expiring Spring 1981

- Norma Dick, Clovis Unified School District, California
Eleanor M. Ladd, University of South Carolina, Spartanburg,
South Carolina
John C. Manning, University of Minnesota, Minneapolis, Minnesota

Term Expiring Spring 1982

- Nicholas P. Criscuolo, Betsy Ross Middle School, New Haven,
Connecticut
Bernice E. Cullinan, New York University, New York, New York
Patricia S. Koppman, San Diego Unified Schools, San Diego, California

Copyright 1979 by the
International Reading Association, Inc.

Library of Congress Cataloging in Publication Data

Dillingofski, Mary Sue.

Nonprint media and reading.

(IRA annotated bibliography series)

1. Audiovisual education—Bibliography.

2. Educational technology—Bibliography.

3. Reading—Bibliography. I. Title. II. Series.

International Reading Association. IRA annotated
bibliography series.

Z5814.V8D5 [LB1043] 016.37133 79-16545

ISBN 0-87207-334-3

Contents

	Introduction	4
6	Audio and Visual Channels	
	Audio	7
	Visual	8
	Combined Audio and Visual	9
14	Television and Film	
	Film	15
	Learning from Television	16
	Commercial Television	18
	Public Television	20
	Locally Produced Television	24
27	Computers	
	Computer Assisted Instruction	28
	Suggested Readings	33

Introduction

Since the end of World War II, nonprint media—including audio recordings, still pictures, films, instructional television, and computers—have been incorporated with varying degrees of success throughout all areas of the academic environment, including the reading curriculum. However, the use of educational technology to teach specific reading skills is a topic that still causes considerable debate among reading researchers, developers, and practitioners.

Irwin (1976, p. 387) defines educational technology as embracing "all the newer media used for instructional purposes as well as instructional modifications necessary to incorporate the media into the curricular framework." Curricular modification, then, is the key to the effective use of educational technology in reading. No longer can we afford to view nonprint media merely as audiovisual aids tacked onto existing reading programs or as fillers for unscheduled time.

The process is not an easy one, however. The dimensional qualities of all media—that is their technological, situational, instructional, and symbolic qualities (Salomon, 1978)—need to be carefully researched and understood by reading personnel in order to avoid what Salomon (p. 37) has called "full acceleration in neutral gear." We need to continue to carefully define the interaction between task requirements and to apply instructional design principles such as participation, repetition, and feedback to mediated reading programs.

In addition, reading practitioners need to become familiar with media research, particularly the relationships among instructional media, learning objectives, and the learner. As Irwin (1976, p. 390) notes, "It is not so much the media that contribute to success in reading, rather it is the teacher's effective use of technology that determines success in reading."

The items selected for this bibliography are not intended to be a complete listing. Rather, in the author's opinion, they seem to be the most significant of those in the publications reviewed. It is hoped that a critical reading of the original reports will answer some questions and raise many more.

A list of recommended readings is included at the end of this bibliography for those who would like practical suggestions for applying educational technology in the reading curriculum.

Audio and Visual Channels

Numerous studies have investigated the effectiveness of audio recordings and combinations of audio recordings and printed texts for increasing the reading abilities of learners at all age levels. Allen's research (1969, p. 222) suggests that audio recordings are moderately effective for learning factual information and procedures and for developing attitudes, opinions, and motivation. Indeed the tape recorder has long been used in reading programs for just such learning objectives. Reading consultants and classroom teachers have frequently used the tape recorder for individual diagnosis, for improving oral reading fluency and listening skills, and for motivating student authorship in language experience approaches to reading development. However, a review of the literature yields few empirical studies on the use of the audio medium alone in the reading curriculum.

Kranyik's study (1) provides some preliminary data that tape recorded lessons aimed at improving listening skills may be as effective as teacher presented lessons. These preliminary findings should be encouraging to teachers developing individualized reading programs. In addition, the positive results of Smith and Morgan's longitudinal study (2) of a language experience program which encouraged students to record their own stories on tape should also be of interest to those designing individualized programs.

Recently, media formats which combine audio recordings and printed texts have gained acceptance in many reading programs. Both commercially and locally prepared "listen and read" programs are available for a wide range of children's literature. The additional audio reinforcement seems to aid those students whose reading skills are not yet fully developed or whose motivation to read is particularly low. Several studies (10, 12, 13, 14, 15, 16) seem to indicate that such a multisensory approach may have a positive effect on increasing comprehension skills, reading rate, and attention span. The research does not yet seem to be as conclusive on the effectiveness of tape-text programs in increasing sight word vocabulary (6, 8) or word identification skills (8).

The application of visual media, such as still pictures and slides, to the reading program has not been extensively researched. While photographs have long been used to motivate creative writing and are now an integral part of most commercially prepared language experience programs, their effectiveness in increasing sight word vocabulary, word identification skills, and comprehension has not been well documented. Likewise, the numerous slide-tape packages available for reading programs do not appear to have been carefully analyzed either by the developers prior to production and distribution or by those incorporating such multisensory packages into their reading curriculum. Finally, descriptive articles do appear in the reading literature encouraging students to produce photographs in language experience programs (5). However, little empirical evidence exists as to the effectiveness of such student production of visuals to increase reading skills or motivation. While Allen suggests that still pictures are very effective in learning visual identifications and moderately effective in learning factual information, principles, concepts, rules, and procedures, the research on the visual channel media in reading is scanty and inconclusive at this time.

Several questions remain unanswered on the interaction between audio or visual media and the reading task. How does print differ from pictures and spoken language, and what are the consequences for transfer between print and audio recordings or still pictures? How does the amount of structure in the recording or the denseness of the picture affect the learning of specific reading skills? How can audio recordings or still pictures aid in the visual identification of letters, the learning of principles and rules of decoding, and the development of positive attitudes toward reading?

Audio

1. Kranyik, Margery. "The Construction and Evaluation of Two Methods of Listening Skills Instruction and Their Effect on Listening Comprehension of Children in Grade One," unpublished doctoral dissertation, Boston University, 1973.

Investigated the effectiveness of teaching listening skills by live and audiotape presentations to first grade children who had not yet developed reading skill. Group one was taught three specific listening skills by a teacher. Group two was taught the same skills via audiotape. Group three received no instruction in listening skills. Results indicated that groups one and two made significant gains in listening skills over the control group, and there was no significant difference between the two experimental groups. Author concludes that listening skills can be taught to

students who have as yet no reading skill and that taped instruction was not less effective than instruction by teachers.

2. Smith, Lewis, and Glen Morgan. *Cassette Tape Recording as a Primary Method in the Development of Early Reading Materials*, 1973. ED 083 544.

Conducted experiment to determine the effect of student authored and recorded stories on the reading abilities of first and second graders. Districtwide implementation of the program for one year involved encouraging students to record stories or experiences on audiotapes. Typed copies of the stories were returned to the students and frequently shared with other children. A similar district served as a control. Results indicated that the first grade students in the program significantly outscored the control group on the Stanford Achievement Test. No significant differences in reading achievement were found between second grade groups or in reading attitude or self-esteem for either group at both levels.

3. Witkin, Belle Ruth. *Reading Improvement through Auditory Perceptual Training: End Report, 1971-1972*. Washington, D.C.: Bureau of Elementary and Secondary Education, 1972. ED 079 694.

Investigated the effectiveness of a tape recorded, sequenced program of auditory perceptual training in raising the reading and listening skills of students in grades two through six. 152 students in grade two and 39 learning disability students (grades two through six) participated. Results of standardized and criterion referenced pretest/posttest scores revealed that students made no significant gains on most of the variables. Replication of the study for a third year was recommended.

Visual

4. Dayton, Deane. "Inserted Post-Questions and Learning from Slide-Tape Presentations: Implications of the Mathemagenic Hypothesis," *AV Communication Review*, 25, 2 (Summer 1977), 125-146.

Reviews current research studies on the application of mathemagenic learning behaviors to written instructional materials, motion pictures, and slide-tape presentations. Concludes that the insertion of factual post-questions can result in increased learning and suggests further research questions.

5. Goddard, Laura. "Photography and LEA: Open to Suggestion," *Journal of Reading*, 21, 3 (December 1977), 199-200.

Describes briefly a language experience approach using photography in a remedial reading lab at the junior high level. Twelve students took photographs, dictated corresponding stories, and created finished products to share with others. Initial program was unstructured; revised program required initial planning by students and limited the number of photographs each student could take. Pretest/posttest reading scores of initial program showed gains equal to those made in the regular reading lab. Scores from the revised program revealed three months growth for each month in the program. Author concludes that a "language experience photography based program was an effective means of teaching reading."

Combined Audio and Visual

6. Borton, T., and L. Belasco. "Dual Audio TV Instruction," *AV Communication Review*, 22, 2 (Summer 1974), 133-152.

Investigated the effectiveness of dual audio TV instruction in which a radio simulcast teaches vocabulary during the silences on a commercial television program. 417 first and second graders were assigned to one of four treatment groups: 1) Ss who used their own radios; 2) Ss who received a "project" radio; 3) Ss who received a written booklet; and 4) a control group which merely watched the TV show with no additional materials. Ss in groups one and two were instructed to tune into the radio simulcast at home as they watched daily broadcasts of "Spiderman." Results indicated that the "own radio" group scored significantly higher than any other group at the .05 level on tests of program vocabulary. Limitations included lack of random sampling, selection of vocabulary words for instruction, and scheduling of program to reach largest potential audience.

7. Bryant, Antusa, et al. "The Effectiveness of Taped Reading Instruction in Increasing the Reading Rate and Comprehension of Undereducated Adults," *Adult Education*, 21, 4 (Summer 1971), 246-252.

Analyzed reading rate and comprehension as they related to two methods of reading: silent and silent using a tape recorder. 100 volunteers who were either grade school or high school dropouts were administered two reading selections written at approximately the students' instructional level. One selection was read silently; the other was read silently as subject listened to the selection recorded at 127 wpm. Results indicated that taped instruction resulted in improvement of both speed and comprehension. Authors noted that audiotapes appeared to have a

deleterious effect on both comprehension and rate of Ss whose reading abilities were above the eighth grade level and suggest that further research using compressed speech tapes (300 wpm) for such students may be appropriate.

8. Button, Mary. *An Experiment to Determine the Effectiveness of Using Audiotapes for Independent Activities in First Grade*. ED 079 952.

Investigated the effectiveness of using taped lessons with accompanying worksheets on the sight vocabulary and word identification skills of first graders. The experimental group listened to audiotapes on auditory perception and phonics in addition to regular classroom instruction. The control group received no special instruction via audiotapes and worksheets. Results indicated no significant difference between the experimental group and the control group.

9. Dequin, Henry. "A Study of the Effect on Achievement as Influenced by the Relationship between the Individual's Cognitive Style and Instructional Mode," unpublished doctoral thesis, Wayne State University, 1975.

Designed to determine whether student achievement could be improved by matching cognitive style to instructional mode. 184 sophomores and juniors were assigned to either a reading treatment or an audiotape treatment based on their reading and listening abilities and preferences for print or audiotape. Results indicated that, on the basis of the instruments used, 1) a valid and predictive diagnosis of cognitive style could not be developed; 2) reading or listening preference did not measurably affect achievement; and 3) the reading mode was more effective than the listening mode.

10. Gribbon, Roberta. "An Evaluation of Auding as an Aid to Comprehension of Literature for College Students," unpublished doctoral dissertation, University of Maryland, 1974.

Conducted to determine the effect on reading comprehension of listening to audiotapes while reading silently. 24 subjects in a college literature class were divided on the basis of achievement level into three treatment groups: book/tape, book only, and tape only. Results indicated that on the first trial the book/tape group showed significantly greater comprehension than the book only group. No significant differences were found between the groups on subsequent trials. The three treatments seemed to be equally effective.

11. Judson, Arlene. *An Individualized Audiovisual Instructional Program for Primary Students with Reading Problems*.

Washington, D.C.: National Center for Educational Research and Development, 1974. ED 081 218.

Investigated the effectiveness of an audiotutorial reading program for 21 third graders with reading problems. The program consisted of 1) viewing filmstrip-audiotape lessons on vocabulary, 2) review of vocabulary, 3) listening to supplementary stories on audiotape; 4) reading the story onto audiotape, and 5) evaluation of oral reading by teachers. Results of standardized testing yielded the following results, expressed in years of gain: word knowledge, 1.3; word discrimination, 1.2; and reading comprehension, 1.9.

12. Linder, Ronald, and Henry Fillmer. "Auditory and Visual Performance of Slow Learners," *Reading Teacher*, 24, 1 (October 1970), 17-22.

Investigated the comparative effectiveness of auditory, visual, and simultaneous auditory-visual presentations in 108 second grade boys. Task required sequential recall of 8 familiar objects, 8 digits, and 8 colors. Results indicated that the total auditory performance was significantly poorer than the total visual and total auditory-visual for the three tasks combined.

13. Rao, Anasuya. "The Effect of Simultaneous Aural-Visual Language Reception on Reading Ability among Selected Educationally Disadvantaged Freshmen Students," unpublished doctoral dissertation, Texas A & M University, 1973.

Designed to investigate the effectiveness of aural-visual presentations on the reading abilities of 72 educationally disadvantaged college freshmen. Group one used audiotapes and printed materials; group two used only audiotapes; and group three used only printed materials. Instruction lasted for thirty minutes per day, four days per week, over a four week period. Results indicated that the simultaneous aural-visual training was more effective in improving comprehension than the other methods. Although no significant differences between methods was noted for improving vocabulary, gains were made regardless of method of presentation.

14. Sgana, Frank. *Success in Mathematics through Aural Reading Techniques*. Washington, D.C.: Bureau of Elementary and Secondary Education, 1974. ED 086 544.

Describes SMART, an audiotutorial mathematics program for fifth and sixth grade students which utilized audiotapes and worksheets prepared at different ability levels. The audiotape component insured that students who had reading problems

could still make use of the individualized instruction. When results of the standardized math tests were compared with results from a traditional math program, the differences in achievement gains for the audiotutorial group were significant at the .01 level.

15. Schneeberg, Helen. "The Listen and Read Project: Motivating Students through Dual Modalities," *Elementary English*, 50, 6 (September 1973), 900-904.

Conducted to determine whether cassette tape/book combinations, supplemented with language experience activities, affected the reading abilities of second and third grade children. Both whole group and small group instruction, using the "Listen and Read" packages, were conducted for one hour per day during one school year. While no control group data were reported, pretest/posttest reading scores indicated significant gains in reading.

16. Thames, Kenneth, and Charles Rossiter. "The Effects of Reading Practice with Compressed Speech Audiotapes on Reading Rate and Listening Comprehension," *AV Communication Review*, 21, 1 (Spring 1972), 35-42.

Study conducted to determine the effectiveness of using compressed speech tapes as pacers during reading rate practice. 24 high school sophomores read ten short stories while listening to the stories on compressed speech tapes which ranged from 150 wpm to 350 wpm. 24 subjects in the control group read only the printed texts. No information is available on reading rate instruction for the two groups. Results indicated that the experimental group increased their rate significantly over the control group. No significant differences in comprehension were noted between the groups.

17. Whittaker, JewLeane. "Department of Reading and Study Skills at Texas Southern University: A Longitudinal Study to Determine an Effective Method of Teaching Reading to College Students Whose Backgrounds Are Partially or Wholly Disadvantaged," paper presented at the National Reading Conference, Tampa, Florida, 1971. ED 056 849.

A "reading machine" oriented reading course was compared to a textbook oriented course for 340 disadvantaged college freshmen. After one semester, the experimental group did not differ significantly from the control group.

18. Young, Robert. "A Comparison of Reading and Listening Comprehension with Rate of Presentation Controlled," *AV Communication Review*, 21, 3 (Fall 1973), 327-336.

Designed to compare reading and listening comprehension and retention under carefully controlled conditions involving rigorous control of the rate variable. 90 undergraduates participated in each of two experimental groups and 31 undergraduates participated in the control group. For the experimental groups, 14 informative messages were prepared. For the listening group, the messages were presented via audiotape at approximately 175 wpm. For the reading treatment, a film was prepared showing one line of print at a time, with the rate of presentation equal to the rate of the audiotapes. The control group read the messages from a printed page at their own speed. No additional data are available on the subjects' reading abilities or the difficulty levels of the passages. Results of immediate and delayed testing yielded no significant differences between the experimental groups.

Television and Film

Instructional films have gained widespread use in the schools since the refinement of 16mm equipment following World War II. Numerous film distributors include specific reading skills films in their catalogs, and short 16mm films are often used for discussions in reading programs. In addition, story related commercial films have often been used for book/film "comparison and contrast" studies in reading, language arts, and English programs. With the recent improvements in Super 8mm technology, filmloops are now available which attempt to teach specific vocabulary and word identification skills. Finally, student filmmaking using the Super 8mm format is gaining increased acceptance in language experience based programs, particularly in the areas of motivation, vocabulary development, and higher level comprehension skills.

Yet a review of the research yields surprisingly few studies on the use of film to improve specific reading skills (19, 20). Therefore, no firm conclusions on learning reading skills from film can be drawn at this time.

The same cannot be said for television. The use of television in the schools and the effect of television on our reading habits has spawned everything from cries of doom to shouts of salvation in the popular press. A growing amount of empirical evidence is available on the use of television to improve specific reading skills.

Several studies have focused on the relationship between amount of televiewing and academic achievement (21, 22, 23). Results suggest that there may be little correlation between hours of viewing and grades in school. One study (23) suggests that the amount of viewing per week has not appreciably changed in the past twenty years.

Numerous studies have investigated the use of programs available on the three commercial networks to increase the skills and motivation of the disabled reader (30, 31, 32, 33, 34, 35). While no definite conclusions can be drawn from these divergent studies, it appears that commercial television programs can form the basis for teacher developed lessons on specific reading skills.

Without doubt, the majority of the empirical data on learning from TV emanates from studies of "Sesame Street" and "The Electric Company," productions of the Children's Television Workshop which are broadcast via public television channels. A review of the research on "Sesame Street" seems to support the position that, while the gains in reading readiness may not be as great as originally reported (49), preschool viewers can make gains in several areas, particularly in letter and number recognition (38). One interesting variable seems to be the amount of parental encouragement for viewing the show and the amount of subsequent discussion and interaction (39, 42).

Encouragement and interaction may also be key factors arising from the research on "The Electric Company." Originally planned for home viewing, the program seems to be most successful with elementary students when viewed in the classroom and followed by teacher reinforcement of specific reading skills presented during the program (47). However, the program has not been as successful with older children as "Sesame Street" has been with preschoolers (37). One study (37) seems to indicate that one year of viewing may yield optimal results for young disabled readers.

Finally, locally produced television programs and videotapes have been created to attempt to increase specific reading skills. The programs range from two-way TV using cable lines and computer terminals (25, 50, 52) to language experience programs using television studios for student productions (54). While no definite conclusions can be drawn from such divergent studies, it does appear that, given the right learning conditions, children can learn from instructional television (24). That is, gains may be made in specific reading skills when the instructional design of the program provides for participation, feedback, and transfer.

Several questions remain unanswered on the effectiveness of film and television to teach specific reading skills. If, as Allen (1969, p. 222) notes, both film and television are effective in learning principles, concepts, and rules, how might television and film aid students in visualizing such abstract ideas in print? What effect does the viewing environment of the school or home have on learning specific reading skills? How does the denseness of the visual or auditory channel affect learning outcomes? How does print differ from pictures and spoken language, and what are the consequences for transfer among television, film, and print? Can TV tap higher level cognitive skills? How can TV be used in an interactive model of instruction?

Film

19. Cox, Carole. "The Liveliest Art and Reading." *Language Arts*, 52, 6 (September 1975), 771-775, 807.

Describes methods for relating student filmmaking to reading development, particularly in the areas of motivation, vocabulary development, comprehension, critical reading, creative reading, and reading for a purpose. Includes practical suggestions for incorporating filmmaking into individualized reading programs.

20. Dech, Robert. *Story Related Films in Eighth Grade Reading*, Lehigh University, 1975. ED 096 608.

Describes a study in which story related films were used in conjunction with basal textbooks. One group used a regular basal text, while the second group used the same text and story related films. Results of the one year study yielded no significant difference between groups in vocabulary or comprehension. However, students in all groups gained an average of 1.5 years in reading comprehension.

Learning from Television

21. Adams, Anne, and Cathy Harrison. "Using Television to Teach Specific Reading Skills," *Reading Teacher*, 29, 1 (October 1975), 45-51.

Reports the results of a questionnaire on television and reading administered to 223 students in grades four through six. Among the conclusions drawn are: 1) about one-half of the elementary students can read most of the words they see on TV, while 10 to 15 percent ignore or don't read any of the words; 2) 80 percent of the poor readers thought TV helped silent reading the most; 64 percent of the average readers thought spelling was helped the most; and 76 percent of the good readers thought vocabulary was aided the most by reading the words on TV. Numerous suggestions for using TV to reinforce specific reading skills are included in the article.

22. Bennett, D. "The Effects of Domestic Television on the Academic Performance of the Child," *Visual Education*, April 1974, 25-32.

Reviews the early literature (1955-1968) on the effects of television on the academic performance and activities of children throughout the world. The author concludes that 1) "there is no notable difference in school performance that can be attributed solely to television viewing," 2) "the early impetus which TV gives to language learning does not constitute a long range advantage," and 3) "the general pattern of reading time has not been eroded by television."

23. Childers, Perry, and James Ross. "The Relationship between Television and Student Achievement," *Journal of Educational Research*, 66 (March 1973), 317-319.

Reports the results of a survey of 100 fourth and fifth grade students to determine the relationship between number of hours of television viewing and academic achievement. When correlated with grade point average, intelligence, and achievement test scores, number of hours of viewing showed no significant relationship to grades in school. The authors conclude that the quantity and quality of TV viewing have not changed appreciably in the past twenty years and are not a predictor of student achievement.

24. Chu, Godwin, and Wilbur Schram. "Learning from Television: What the Research Says," in S.G. Tickton (Ed.), *To Improve Learning: An Evaluation of Instructional Technology*. New York: R.R. Bowker, 1970.

Summarizes the major research observations on learning from television. Among the sixty reported findings are: 1) given favorable conditions, children learn efficiently from ITV; 2) subtitles tend to improve learning from TV; 3) inserting questions into a TV program does not seem to improve learning; 4) given favorable conditions, pupils can learn from any instructional media now available; 5) there is no consistent evidence to suggest that color, animation, or humor significantly contribute to learning from ITV; and 6) participation, repetition, and feedback seem to increase learning from television.

25. Feeley, Joan. "Television and Reading in the Seventies," *Language Arts*, 52, 6 (September 1975), 797-801, 815.

Reviews several studies of the effectiveness of commercial and public television programs as instructional and motivational devices to teach reading. Included are discussions of "Sesamê Street," "The Electric Company," the "TV Reading Program," and the interactive feedback potentials of two-way cable TV.

26. Fisher, Richard, and William Bruss. "The Viewing of TV, Perceptual Passivity, and Reading," *Colorado Journal of Educational Research*, 15, 3 (Spring 1976), 33-37.

Designed to investigate the relationships among time spent viewing TV, perceptual passivity, reading achievement, and reading attitude. Subjects were 120 fifth and sixth grade students. Perceptual passivity was assessed on a series of maze tests which established the degree to which one tends to adhere to a mental set. A coefficient of .27 was found between perceptual

passivity and number of hours of televiewing. A coefficient of .20 was found between perceptual passivity and reading test scores.

27. Lamb, Pose. "Reading and Television in the United States," in John Merritt (Ed.), *New Horizons in Reading*. Newark, Delaware: International Reading Association, 1976, 370-382.

Summarizes research on the influence of extra curricular television on children's reading and the use of instructional television in the classroom. Author concludes that "Children can learn much from television which will make it possible for them to benefit by responding to print more efficiently and with greater understanding."

28. O'Bryan, K. G., and Harry Silverman. *Report on Children's Television Viewing Strategies*. New York: Children's Television Workshop, 1972. ED 126 871.

Describes the results of a study of the eye movement patterns of 60 children enrolled in a reading clinic. Good, slow, and nonreaders were shown printed materials on a TV screen accompanied by action sequences and voice recordings. Results included the following: 1) good readers quickly and accurately processed material on the screen and were not negatively affected by action or distraction; 2) slow readers were often distracted, frequently failed to read past the first two or three letters, needed more time to fixate on the material, and looked more often at the speaker; 3) nonreaders displayed random looking behavior for printed materials, were strongly drawn to action on the screen, and were slower at orienting to new stimuli.

Commercial Television

29. Cook, Jimmie Ellis. "A Study of Critical Listening Using Eight-to-Ten-Year-Olds in an Analysis of Commercial Propaganda Emanating from Television," unpublished doctoral dissertation, West Virginia University, 1973.

Designed to investigate the effectiveness of specific lessons in becoming aware of the propaganda techniques employed by commercial advertisers on television. Results of the study indicate that children can learn to recognize propaganda techniques on television and can transfer this learning to recognizing propaganda in print.

30. Dalzell, Bonnie. "Exit Dick and Jane," *American Education*, 12, 6 (July 1976), 9-13.

Describes recent results of the Television Reading Program in operation for over six years in the Philadelphia schools. The

program uses scripts and videotapes of commercial television shows to teach specific reading skills to poor readers and to motivate those students to learn. While no statistical data are reported, the author notes that "for every year in TV reading, a student gained at least a year and a half on his or her achievement score."

31. Hamilton, Harlan. "The Relationship between Televiewing and the Reading Interests of Seventh Grade Pupils," unpublished doctoral dissertation, Boston University, 1975.

Designed to investigate the relationship between television viewing habits and the reading interests of 253 seventh grade students. Eighteen different "TV tie-in" books were available to the students to read over a six week period. Following this period, the subjects were tested on their comprehension and personal reaction to the books. Results indicated that 1) the total population preferred TV tie-ins over non-TV tie-ins; 2) pupils who spent much time watching TV were more inclined to read TV tie-ins; 3) pupils did not feel that TV tie-ins were difficult to read. Author concludes that popular TV programs can be effective motivators for reading, regardless of reading abilities of students.

32. Kinnamon, Sue. "Commercial Television and Adult Reading," *Journal of Reading*, 18, 6 (March 1975), 470-474.

Reports the results of a survey of 205 commercial television stations throughout the United States, its territories, and Canada concerning commercial television reading programs for adults. Of those stations responding, only seven indicated that they aired locally produced reading programs. Although no statistical data are reported on the effectiveness of these TV reading programs, viewer response and ratings seem to indicate an interest in the programs, both by semiliterate adults and foreign born residents with no English skills.

33. Mason, George. *Teaching Reading with Commercial Television Viewed at Home*, report prepared at the University of Georgia, 1977. ED 141 764.

Describes a commercially televised reading program for sixth and seventh grade students who watched TV at home but who received correlated instruction at school, including TV script reading. Results of the study of 1,870 subjects indicated that the three week, twelve episode program increased vocabulary and words in context scores but did not increase comprehension or attitude scores.

34. Peters, F. "Norwegian TV: A Continuing Reading Program," *Journal of Reading*, 18, 3 (December 1974), 200-202.

Briefly describes the format of Norwegian television, which subtitles all foreign and local television programs. Subtitling is supplemented through extensive preparation for each foreign show, including articles in newspapers and summary comments following each show.

35. Solomon, Bernard. "To Achieve—Not to Please," *Learning Today*, 8, 1 (Winter 1975), 48-51.

Investigated the use of scripts and videotapes of popular commercial television shows to increase the motivation to read for 1,000 Philadelphia students. The year long Television Reading Program involved skimming scripts, viewing videotapes, completing minilessons on reading skills, and role playing of actors' parts. Although no statistical data are reported, the author notes that the subjects "showed remarkable changes in their attitudes toward reading." Descriptive data from the teachers noted that "the motivation to read television scripts and act out the role of one's favorite star was the biggest factor in encouraging students to read."

Public Television

36. Anderson, Daniel, et al. "The Effects of TV Program Pacing on the Behavior of Preschool Children," *AV Communication Review*, 25, 2 (Summer 1977), 159-167.

Investigated the short term effects of TV program pacing on the subsequent behavior of young children. One group was shown a specially edited version of "Sesame Street," including rapidly paced segments; the second group was shown a very slowly paced version of "Sesame Street." The control group listened to stories read by a parent. Immediately following the treatments, a number of measures of impulsivity, perseverance, attention, activity, and constructiveness of play were taken. Results did not indicate any support for any immediate effects of television program pacing on the behavior of preschool children.

37. Ball, Samuel, et al. *Reading and Television: A Follow Up Evaluation of "The Electric Company,"* Children's Television Workshop, 1974. ED 122 798.

The second year evaluation of "The Electric Company" tested the reading skills and concepts presented on the program. Results indicated a positive impact on reading skills, although the size of the impact was less the second year when compared to the first

year. Authors conclude that one year's viewing seemed to provide the major benefit for students.

38. Bogatz, G.A., and S. Ball. "Some of the Things You've Wanted to Know about 'Sesame Street'," *American Education*, April 1971.

Reviews the summative evaluation of the first year of "Sesame Street." Among the findings: 1) the greatest gains were in the areas of letter and number recognition, forms, and classifications; 2) disadvantaged children who watched "Sesame Street" performed better on measures of the program goals than advantaged children who rarely or never watched; 3) the children who watched the most learned the most, regardless of age of the viewer.

39. Cook, Thomas, and Ross Conner. "Sesame Street Around the World: The Educational Impact," *Journal of Communication*, 26 (Spring 1976), 155-164.

Reviews seven studies in the United States and Mexico on the impact of "Sesame Street" on learning. Four major conclusions were reached: 1) a combination of interpersonal encouragement and viewing of "Sesame Street" facilitated growth in a variety of cognitive areas that are part of the program's curriculum; 2) the combined effects of viewing and encouragement were greater than the effects of viewing without encouragement; 3) viewing the program without encouragement did provide some gains; and 4) the demonstrated effects of viewing "Sesame Street" without encouragement to date have been of limited magnitude and generalizability.

40. Corporation for Public Broadcasting. *Summary of Project STRIVE*, 1972. ED 065 755.

Describes preliminary objectives for Project STRIVE, a public television program aimed at providing needed educational services to adults who have never completed high school but who have at least a sixth grade reading ability level. Objectives include increasing problem solving ability, improving reading and math skills, and attracting adults to continuing education programs. The program's aims and format are included.

41. Darnell, C. Dean, and William Goodwin. "The Kindergarten Child of 1971 or the Class of 1984," paper presented at the American Psychological Association Annual Meeting, Chicago, 1975. ED 116 816.

One purpose of the longitudinal study was to describe kindergarten children's reading abilities. For entering kindergarteners,

performance on readiness test tasks was significantly correlated to socioeconomic status, age, and sex. Attending preschool and watching "Sesame Street" were also found to be slightly related to readiness in reading.

42. Diaz-Guerrero, Rogelio, et al. "Sesame Street Around the World. Plaza Sesamo in Mexico: An Evaluation," *Journal of Communication*, 26 (Spring 1976), 145-154.

Compares two separate studies of the effectiveness of the Mexican version of "Sesame Street." Results of the first study indicated that children who watched "Plaza Sesamo" for six months under controlled conditions showed greater gains than did comparable children who watched only cartoons for the same period. Results of the second study, a large field experiment under less well controlled conditions but with a larger number of subjects, yielded generally negative results. Limitations in the design of the second study are discussed. The authors conclude that "It may well be necessary, especially with disadvantaged children, to provide related forms of (adult) stimulation and reinforcement."

43. Dirr, P.J., and R. Pedone. "A National Report on the Use of Instructional Television," *Audiovisual Instructor*, 23 (January 1978), 11-13.

Reports the preliminary results of a national survey of administrators and teachers on the usefulness and availability of instructional television (ITV). ITV is defined as "any in-school use of television, either broadcast or recorded, for instructional purposes." Preliminary data include: 1) 30 percent of the educators had training in the use of ITV; 2) 30 percent of the teachers used ITV regularly; and 3) more than 30 percent of the school districts held workshops on ITV use. In addition, more than 50 percent of all educators expressed positive attitudes toward ITV, and 40 percent have not formed strong opinions about the medium.

44. Feeley, Joan. "Reading with TV: British and American Approaches," *Reading Teacher*, 30 (December 1976), 271-275.

Provides insight into the content, utilization, and evaluation of television programs for teaching reading by the Children's Television Workshop and the British Broadcasting Company. The BBC program "Look and Read" is built around high interest stories. It aims to motivate children to read the original book and to present concepts of the book to children whose reading skills preclude their reading the book on their own. TV segments are separated by reading practice sessions on vocabulary, context

clues, word identification, and oral reading. Another program, "Words and Pictures," is designed to augment beginning reading instruction and also uses student booklets for postviewing reinforcement. All BBC educational programs strive to present a variety of socioeconomic and dialect speaking groups. Summative evaluation data are not available at this time.

45. Flood, James. "Predictors of Reading Achievement: An Investigation of Selected Antecedents to Reading," doctoral dissertation, Stanford University, 1976.

Investigated the relationship between 25 background and preschool variables and the reading readiness of 36 three and one-half and four and one-half year old children. Results indicated that four variables were most highly related to the prereading measures: 1) educational television recognition, 2) specified parental criteria for tv program selection, 3) number of reading materials available in the home, and 4) warm-up questions preparatory to a parent-child reading episode.

46. Hargis, Charles, et al. "The Effectiveness of tv in Teaching Sight Words to Children with Learning Disabilities," *Journal of Learning Disabilities*, 8, 1 (January 1975), 44-46.

Investigated the effectiveness of television to teach sight words to 8 learning disability students, ages seven to nine. Prior to the television presentation, 90 sight words were divided into four groups: 1) presented on "The Electric Company" and on the Dolch Word List, 2) presented on "The Electric Company" but not on the Dolch List, 3) presented on the Dolch List but not on "The Electric Company," and 4) presented neither on the Dolch List nor on "The Electric Company." No data are reported as to the acquisition of the sight words prior to the television viewing. The subjects viewed "The Electric Company" for 32 consecutive school days. Delayed posttesting results indicated that the subjects did not acquire sight words beyond what would normally be expected through incidental learning. However, the small sample size prohibits generalizations beyond the specified population measured.

47. Ienatsch, Grant Peter. "The Effectiveness of Teacher Interaction on Television Instruction Designed to Supplement a Reading Program for Second Graders," unpublished doctoral dissertation, University of Iowa, 1974.

Investigated the effect on the reading abilities of 156 second graders of teacher interaction during viewing of "The Electric Company." Subjects were divided into three groups: 1) viewing with teacher interaction, 2) viewing with no teacher interaction,

and 3) use of a regular basal reading series without viewing "The Electric Company." Results indicated that teacher interaction with children during viewing yielded "more favorable results," and that children who watched the program without interaction made no significant gains over children engaged in a regular basal reading program.

48. Levin, Stephen, and Daniel Anderson. "Sesame Street Around the World: The Development of Attention," *Journal of Communication*, 26 (Spring 1976), 126-135.

Investigated attention to "Sesame Street" by 70 children ranging in age from 12 months to 48 months. Results indicated: 1) attention was elevated in the presence of adult females, children, puppets, animation, peculiar voices, active movement, singing, lively music, eye contact, rhyming, repetition, alliteration, sound effects, auditory changes, letters, scene changes, and reverse motion; 2) attention was depressed by adult males, animals, inactive stationary activity, still drawings, and zoom ins on parts other than the face of a character; 3) attention was neither depressed nor elevated by slow music, applause, or most camera techniques.

49. Liebert, Robert. "Sesame Street Around the World: Evaluating the Evaluators," *Journal of Communication*, 26 (Spring 1976), 165-171.

Comments that, while the gains in learning from "Sesame Street" may not be as large as initially reported, the success of the program is that it "opened the door for television programs developed to meet children's needs rather than merely capturing their attention for endless commercial messages. Sesame Street has done society a great service by bringing us to the frontier of carefully designed and tested children's programing and its legacy is the challenge to keep the door open."

Locally Produced Television

50. Bazemore, J. "Two-Way TV Technology and the Teaching of Reading," *Journal of Reading*, 21 (March 1978), 518-524.

Describes preliminary results of the Rand-Spartanburg Two-Way Cable Television Project, designed to prepare semiliterate adults for the General Education Department (GED) test. Using a broadband cable system, students received televised reading lessons on their home TV sets and responded via data terminals (keyboards). The project compared adults enrolled in the two-way TV class with adults enrolled in a traditional classroom. Preliminary results indicated that 20 percent of the TV class

dropped out, while 37 percent of the traditional class dropped the course. In addition, 33 percent of the TV class subsequently passed the GED exam, while only 18 percent of the traditional class passed the exam.

51. Bertou, Patrick. "An Analysis of the Relative Efficacy of Advance Organizers, Post Organizers, Interspersed Questions, and Combinations Thereof in Facilitating Learning and Retention from a Televised Lecture," *Journal of Educational Research*, 5, 7 (March 1972), 329-333.

Designed to investigate the effectiveness of adjunct aids for improving learning and retention from a videotaped lesson of concept learning in science. 176 ninth graders were randomly assigned to eight isolated and combined instances of adjunct aids; one group was instructed without the use of such aids. Results indicated that the acquisition and retention of knowledge from the videotaped lectures were significantly affected by the use of interspersed questions but were not significantly affected by the use of advance or post organizers. Limitations included the content and constructions of the organizers, the use of the television medium, and the novelty of interspersed questions. No information is reported on the instructional design of the TV lecture itself.

52. Brother Austin David. "ITV, Telephone, and Computer As an Instructional System," *AV Communication Review*, 21, 4 (Winter 1973), 453-465.

Discusses a program of interactive television linking TV, a computer, and the telephone into a unified system of instruction. Describes a study of 119 teachers, divided into four experimental and three control groups, who were instructed on the uses of computers in education via various combinations of interactive TV or via print. Results of the study indicated that all experimental groups showed greater improvement in test scores than control groups.

53. Clark, Sara H. *Mobile Learning Centers of Minneapolis, 1971-1972*. ED 083 261.

Investigated the effectiveness of the Dorsett TV-like teaching machine for improving the reading skills of secondary students who were one or more years below grade level in reading. Results of the year long study indicated that 80 percent of the subjects made "grade equivalent gains on comprehension tests over those expected for length of instruction. 64 percent made such gains on vocabulary tests." It was recommended that the project be continued.

54. New York State Education Department. *Graphics Expression Reading Improvement System: Evaluation Report, 1972-1973*. ED 088 493.

Describes the Graphics Expression Reading Improvement System (GERIS), a program which seeks to improve the reading and language skills of fourth through ninth graders via student created TV productions. 172 students, each of whom was reading at least two years below grade level, participated in the year long program. Results indicated that students in grades four through six made significant gains in reading. Improvements for students in grades seven through nine were not significant at the .05 level. However, the seventh graders did show over a year's growth and did achieve at a rate well over twice that of their previous performance in traditional reading programs.

Computers

The computer has been used in the reading program in three major ways: for drill and practice, for instructional diagnosis and decision making (often called computer managed instruction), and in a tutorial and dialogue program (often called computer assisted instruction). Obviously, one major advantage of CMI or CAI is the individualization of instruction and the provision made for student interaction during the learning process. In addition, accurate and complete information on student progress is available to the classroom teacher. The majority of the computer studies reported here use a computer reading program as a supplement to teacher instruction rather than as a replacement of teacher instruction.

Results of various Stanford CAI programs in elementary and intermediate reading skills programs appear to indicate significant growth in vocabulary and word identification skills (56, 57, 61, 62). Initial results for the Computer Animated Reading Instruction System (CARIS) seem to indicate that this system may eventually prove to be effective with children with severe learning handicaps (64). The Plato IV computer system has been programmed to teach reading skills to learners from elementary through adult basic education levels and has also been programmed for on-line diagnosis of reading difficulties (60, 68, 69, 72). The Westinghouse PLAN program has significantly improved the reading skills of a small group of behaviorally disordered adolescents (55). Finally, the Edison Responsive Environment System (ERE), popularly known as the "talking typewriter," has been used to increase reading readiness and beginning reading skills (63, 71).

Although much of the research on CAI has yielded positive results, computers have not penetrated many school reading programs. Several explanations seem possible. First, there is a dearth of validated programs for reading instruction. The knowledge and precision necessary for the development of programs may have hindered the application of CAI to specific reading programs at the local level. Second, the cost per student continues to be prohibitive. Although one study (68) would seem to support the position that

multiple simultaneous use of a terminal can decrease cost per student with little concomitant loss of mastery, further empirical data are needed before such a procedure can be recommended. Third, while computer programs can foster growth in word identification skills, they have not often been used to foster higher level cognitive strategies; cost-efficiency aspects make it difficult to justify such expenditures for only a portion of the total reading program.

Computer Assisted Instruction

55. Aaron, Robert, et al. "Computer Managed Instruction for Behaviorally Disordered Adolescents," *Reading Improvement*, 12, 2 (Summer 1975), 103-107.

Investigated the use of Westinghouse PLAN program in reading and mathematics with 72 behaviorally disordered adolescents. 36 subjects in the experimental group received instruction for 120 days via the PLAN program. 36 subjects in the control group received traditional classroom instruction for 140 days from basal readers and math textbooks. Results indicated that the gains of the experimental group over the control group were significant at the .01 level for vocabulary and total reading and the .05 level for comprehension. Gains in mathematics did not prove to be significant, although progress had been made.

56. Atkinson, Richard. "Teaching Children to Read Using the Computer," *American Psychologist*, 29, 3 (March 1974), 169-178.

Describes the Stanford CAI program in initial reading. Included are a description of the program strands, schemes that control sequencing of exercises based on student history, allocation of instructional time among students, empirical evidence of effectiveness, and costs per student.

57. Atkinson, Richard, et al. "Computer Assisted Instruction in Initial Reading: Individualized Instruction Based on Optimal Procedures," *Educational Technology*, 1, 9 (September 1973), 27-37.

Describes the Stanford CAI program in initial reading for students in grades kindergarten through three which supplements normal classroom instruction in reading. Seven reading strands are described: letter identification, sight word recognition, spelling patterns, phonics, spelling, word and sentence comprehension.

58. Caldwell, Robert. "A Comparison of a Programed Text and a Computer Based Display Unit to Teach Reading Skills to

Semiliterate Adolescents," unpublished doctoral dissertation, Penn State University, 1975.

Designed to investigate whether a significant difference in the reading achievement of 56 high school poor readers could be obtained by using a computer based display unit or a programed text. The computer group used a unit from their regular computer assisted instruction in reading. The programed text group used the same materials presented in a programed text. Results of criterion referenced tests indicated that significant improvement in reading skills was achieved by each group. A comparison of pretest/posttest means for both groups, however, indicates that neither medium had a significantly greater effect on reading achievement.

59. Edwards, Judith, et al. "How Effective is CAI? A Review of the Literature," *Research in Review*, 33 (November 1975), 147-153.

Summarizes the results of 33 studies comparing the effectiveness of computer assisted instruction with traditional and nontraditional instructional methods in reading and other academic areas.

60. Elliot, Richard, and Richard Videback. "Reading Comprehension Materials for High School Equivalency Students on the PLATO IV Computer Based System," *Educational Technology*, 1, 9 (September 1973), 20-22.

Describes the format of the PLATO IV program of computer assisted instruction for adults who seek to prepare for the GED examinations. Included are description of reading tasks in the GED exam, the instructional strategy of the PLATO IV system, the automatic branch and return features for vocabulary development, and the student record capabilities.

61. Fletcher, J.D., and Richard Atkinson. "Evaluation of the Stanford CAI Program in Initial Reading," *Journal of Educational Psychology*, 63, 6 (1972), 597-602.

Investigates the effectiveness of the Stanford CAI program in initial reading, which supplements normal classroom instruction in reading. 22 pairs of boys and 22 pairs of girls were matched on the basis of the Metropolitan Readiness Test. The experimental member of each pair received 8 to 10 minutes of CAI instruction daily for five and one-half months. The control member of each matched pair received no CAI instruction. The CAI program resulted in gains in reading which were significant at the .01 level. The data suggest that CAI benefits both boys and girls but is relatively more effective for boys.

62. Fletcher, J.D., and P. Suppes. "Computer Assisted Instruction in Reading: Grades 4-6," *Educational Technology*, 12, 8 (August 1972), 45-49.

Describes the Computer Curriculum Corporation (CCC) reading program for grades four through six. Designed to supplement regular classroom instruction, the program contains five strands: word attack (structural analysis), vocabulary, literal comprehension, interpretive comprehension, and work study skills. Performance data for 162 students who used CCC for 150 ten-minute sessions show that the proportion of correct answers was approximately 90 percent for all strands and all grade levels. No data are reported as to posttest achievement scores in reading.

63. Frazier, Robert, and Susan Zaslav. "An Automated and Nonautomated System of Teaching Reading," *Reading Teacher*, 24, 2 (November 1970), 115-119.

Designed to determine whether the Edison Responsive Environment Learning System (ERE), the "talking typewriter," is more effective in helping 22 second and third grade subjects improve their reading ability than a nonautomated method of teaching reading which uses a typewriter, slide projector, and tape recorder. The same visual and oral materials were used for both treatments. Results indicated that the experimental group made significantly greater gains in reading ability as measured by standardized reading tests. Limitations included the small sample size, lower instructional time for the control group, and difference in competency of instructors.

64. Geoffrion, Leo, et al. "Initial Reading through Computer Animation," paper presented at the American Educational Research Association Annual Meeting, New York, 1977. ED 138 929.

Describes the Computer Animated Reading Instruction System (CARIS) for children with various sensory, cognitive, and physical handicaps. Computer animated cartoons provide children with visual feedback of sentences constructed by the children. Pilot experiments show that children with severe learning handicaps can develop beginning reading skills with this system.

65. Golub, Lester. "A Computer Assisted Literacy Development Program," *Journal of Reading*, 17, 4 (January 1974), 279-284.

Describes a CAI program designed to teach reading skills and to provide career information to illiterate and semiliterate adults. Summative evaluation of the program with 32 subjects yielded significant gains in reading achievement after only ten hours of CAI instructional time.

66. Leton, Donald. "Computer Simulation of Reading: A Progress Report," *Journal of Reading Behavior*, 6, 2 (July 1974), 131-141.

Presents preliminary results of "Simuread," a computer program which translates traditional English orthography into numerical outputs. Author notes that such an approach to evaluation of initial reading materials provides a more objective means for identifying the learning process demands of a reading program than a traditional system which evaluates word length, sentence length, and vocabulary rate.

67. Majer, Kenneth. "Computer Assisted Instruction and Reading: How, What, and Where?" *Educational Technology*, 1, 9 (September 1973), 23-27.

Discusses the major advantages of CAI in reading, reviews current CAI approaches, and speculates on CAI program implementation in the future. Three types of computer programs are discussed: 1) drill and practice programs with a fixed sequence of instruction; 2) tutorial programs with individually tailored program sequences; and 3) dialogue programs which allow the student to construct natural language responses and exercise complete control over the sequence of learning events. CMI (computer managed instruction) is restricted to testing and instructional decision making, or referring students to other instructional materials, and is considerably less costly. With implementation of CAI or CMI the teacher's role becomes one of educational manager. Reviews various CAI programs in reading.

68. Okey, James, and Kenneth Majer. "Individual and Small Group Learning with Computer Assisted Instruction," *AV Communication Review*, 24, 1 (Spring 1976), 79-86.

Designed to investigate the feasibility of multiple simultaneous use of a computer terminal. 60 undergraduates, using the PLATO IV science module, were divided into three treatment groups: 1) using the terminal alone, 2) using the terminal in pairs, and 3) using the terminal in groups of three or four. Results indicated no significant differences in either cognitive achievement or attitude among the three groups. However, highly significant differences in study time were noted; the groups of three or four used significantly less computer time than the other groups. Authors conclude that the cost of computer programs can be lowered with no apparent loss of mastery via multiple simultaneous use of a single terminal.

69. *PLATO Elementary Reading Curriculum*, Illinois University of Urbana. Washington, D.C.: National Science Foundation, 1975. ED 105 377.

Describes the PLATO Elementary Reading Curriculum (PERC). Aims of the program are to build a complete computer based instructional program, design into the structure the possibility for use in a wide range of modes, take full advantage of the audiovisual capabilities of the PLATO IV terminal, and demonstrate the feasibility of the PERC program in a variety of public school settings. Includes a chart showing paths a student takes through the curriculum, objectives, and activities.

70. Schiavone, James, et al. "Computer Assisted Instruction in Reading," *Education*, 91, 4 (April-May 1971), 301-302.

Briefly reviews the advantages of CAI, such as: 1) begins at student's instructional reading level; 2) varies time according to need; 3) motivates the learner; and 4) handles a wide variety of materials. Briefly describes hardware and costs per student.

71. Schulman, Roselind, and Doreen Steg. "Remarks on the Possible Economic Significance of Early Childhood Educational Technology," paper presented at the meeting of the American Orthopsychiatric Association, New York, 1973. ED 115 404.

Report of a pilot study on the use of the Edison Responsive Environment (ERE) machine, popularly called the "talking typewriter," to teach reading readiness skills to three and four year old children. Data collected between 1967 and 1972 on deprived and nondeprived preschoolers, among students exposed and not exposed to ERE, indicated the effectiveness of the ERE in developing prereading skills.

72. Venezky, Richard, et al. *Summary of the Studies for an On-Line Reading Diagnosis System III: Technical Report No. 409*, University of Wisconsin at Madison, Center for Research and Development. ED 138 967.

Three studies were performed to test the feasibility of the PLATO CAI system for on-line testing of reading skills. In study one, three different approaches to vocabulary development were tested: self-screening, synonym, and word matching under brief exposure. 110 elementary children were tested via the PLATO IV terminals. Results revealed problems with both test format and test items. In study two, 95 subjects received a modified program. Results showed an expected range of scores for the synonym and self-screening tests but cast further doubt on the validity of the timed exposure test. A third study led to the rejection of the timed exposure paradigm.

Suggested Readings

Aquino, John. *Film in the Language Arts Class*. National Education Association Publishing, 1977.

A guide for the use of film in secondary and college level literature classes. Includes a discussion of the development of visual literacy skills, sample lessons for book/film comparisons, and a filmography listing approximately 35 film adaptations of novels.

Becker, George J. *Television and the Classroom Reading Program*. Newark, Delaware: International Reading Association, 1973.

Practical suggestions for using the television viewing habits of children in the reading/language arts curriculum.

Cleary, Donna McKee. *Thinking Thursdays: Language Arts in the Reading Lab*. Newark, Delaware: International Reading Association, 1978.

Includes numerous ideas for incorporating student produced media into the reading curriculum.

Feldman, Shirley. "Media and Reading Instruction," in Wayne Otto, et al. (Eds.), *Multidisciplinary Perspective*. Reading, Massachusetts: Addison-Wesley, 1977, 379-399.

Practical suggestions for incorporating nonprint media into a reading laboratory. Includes descriptions of available mediated reading programs and publishers.

Flanigan, Michael, and Robert Boone. *Using Media in the Language Arts: A Source Book*. Itasca, Illinois: F. E. Peacock, 1977.

Numerous practical suggestions for using nonprint media in the reading/language arts program.

Kemp, Jerrold. *Planning and Producing Audiovisual Materials*, Third Edition. New York: Thomas Y. Crowell, 1975.

An indispensable guide for producing all types of audiovisual materials. How to do it.

20
Me and My TV, a publication of the Journalism Education Association, Shabbona, Illinois, 1976.

Presents suggestions for using television to teach reading skills, critical thinking, and values clarification. Briefly summarizes research studies which were designed to investigate some of the classroom TV suggestions offered in the booklet.

Poteet, G. Howard. *Tom Swift and His Electric English Teacher*. Dayton, Ohio: Pflaum Publishing, 1974.

Catalog of useful hardware and software and interesting ideas for their use in mediated English, language arts, and reading programs.

Poullette, Nancy, and Marjorie Hamlin. *Reading Guidance in a Media Age*. Metuchen, New Jersey: Scarecrow Press, 1975.

Discusses the problem of increasing motivation to read in a media age and offers practical suggestions for the use of media in the reading curriculum.

Rodrigues, Joan. "Individualized Instruction Using Audiovisual Materials," *Journal of Reading*, 20, 3 (December 1976), 215-219.

Examines three problems involved in the use of media in the schools: 1) lack of a comprehensive body of research on AV and the learner; 2) lack of scientific preciseness in media research; and 3) lack of quality materials with a thorough explication of their use. Includes seventeen relatively valid research conclusions from which rules can be inferred for media instruction. Suggests questions for future research.

Ruth, Leo, and Deborah Ruth. "Technology of Film and Teaching Reading: Present and Future," in John E. Merritt (Ed.), *New Horizons in Reading*. Newark, Delaware: International Reading Association, 1976, 364-369.

Discusses the use of film in the reading curriculum. Presents specific discussion techniques for incorporating literal, inferential, and evaluative questioning after film viewing and illustrates the use of film for developing language skills, increasing interest, and building self-confidence in the learner.

Sister Rosemary Winkeljohann (Ed.). *Politics of Reading: Point-Counterpoint*. Newark, Delaware: International Reading Association, 1973.

Presents nine arguments on the dominant mode of communication. Is print dead?

Wood, Judith. "Using the Tape Recorder in Teaching Adults to Read," *Journal of Reading*, 11 (April 1968), 528-531.

Includes eighteen practical suggestions for using the tape recorder for diagnosis and remediation of reading problems.

References

- Allen, William. "Audiovisual Instruction: The State of the Art," *Schools and the Challenge of Innovation*, Supplementary Paper No. 28. New York: Committee for Economic Development, 1969.
- Irwin, Joan. "Contributions of Technology to Reading Success," in John E. Merritt (Ed.), *New Horizons in Reading*. Newark, Delaware: International Reading Association, 1976, 386-390.
- Salomon, Gaviel. "On the Future of Media Research," *Educational Communications and Technology Journal*, 26, 1 (Spring 1978), 37-46.

IRA PUBLICATIONS COMMITTEE 1979-1980 Harold L. Herber, Syracuse University, *Chairing* • Alison Bellack, Largo (Florida) C & I Center • Janet R. Binkley, IRA • Faye R. Branca, IRA • Margaret Keyser Hill, Southern Illinois University • Jerry L. Johns, Northern Illinois University • Lloyd W. Kline, IRA • J. E. Merritt, The Open University • Addie S. Mitchell, Morehouse College • Christina Neal, St. Albans, West Virginia • P. David Pearson, University of Illinois at Champaign • Emma W. Rembert, Florida International University • James D. Riley, University of Montana • Maria Elena Rodriguez, Asociacion Internacional de Lectura, Buenos Aires • Robert B. Ruddell, University of California at Berkeley • Carol Sager, Chestnut Hill, Massachusetts • S. Jay Samuels, University of Minnesota • Lyndon W. Searfoss, Arizona State University • Cyrus F. Smith, Jr., University of Wisconsin at Milwaukee • Ralph C. Staiger, IRA • Judith Thelen, Frostburg (Maryland) State College • Carl J. Wallen, Arizona State University

The International Reading Association attempts, through its publications, to provide a forum for a wide spectrum of opinion on reading. This policy permits divergent viewpoints without assuming the endorsement of the Association.